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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,791	08/17/2001	Mark E. Patton	BW-DKT01010	5440

32175 7590 05/09/2003

BORGWARNER INC.  
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EXAMINER
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PAIK, STEVE S

ART UNIT	PAPER NUMBER
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2876

DATE MAILED: 05/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application N .</b>	<b>Applicant(s)</b>	
	09/932,791	PATTON, MARK E.	
	<b>Examin r</b>	<b>Art Unit</b>	
	Steven S. Paik	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Response to Amendment***

1. Receipt is acknowledged of the Amendment filed March 04, 2003.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-20 and 24-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Saka et al. (USP 5,434,792).

Re claims 1, 3, 5-9, 14-20, 24-26, 29 and 30, Saka et al. discloses a production system including a method of detecting missing parts in a workpiece comprising a plurality of parts (col. 1, lines 65+ and col. 4, ll. 35-42) comprising the steps of:

a) moving the workpiece relative to a bar code reader (col. 3, lines 66-68 and the workpiece may be a plurality of parts in a container as disclosed in col. 3, lines. Furthermore, the parts -workpiece- may be attached with bar codes and the parts are moving along the product line by a transporting means or a conveyor, see col. 4, ll. 7-22);

b) detecting a line image across the workpiece with the bar code reader (col. 4, lines 35-40) producing a signal output representative of the line image (col. 4, lines 41-42);

c) deriving a processed signal (a control unit 13 and a line host controller 16) from the signal output of the barcode reader (col. 4, lines 41-42);

Art Unit: 2876

d) comparing the processed signal to a reference (work order sheet) representing a workpiece without missing parts (col. 4, lines 1-13);

e) indicating if the processed signal does not match the reference (col. 4, lines 43-54).

The detecting process is accomplished by reading a barcode label on a product or an ID card attached to a product or a pallet moving along a direction of a conveyer belt by a reader which inherently comprises a light emitting element and a reflected light-detecting unit (usually an array of photodiodes). In addition, an operator controls the start-stop motion of the conveyor belt according to the data read by a reader (col. 4, lines 10-13).

Regarding claim 4, Saka et al. discloses the method as discussed in rejected claim 1 stated above, in which the deriving step c) comprises the steps of amplifying an output from the bar code reader and filtering the amplified output (col. 3, lines 62-65).

Regarding claims 10-13, 27 and 28, Saka et al. discloses the method as discussed in rejected claim 1 stated above, in which the step of deriving a processed signal comprises converting the signal output of the barcode reader into a number (in particular a binary number or hexadecimal number Fig. 4 and col. 7, lines 11+).

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2876

5. Claims 2 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ledvina et al. (USP 4,509,323) in view of Saka et al. (USP 5,434,792).

Ledvina et al. discloses a parallel-link chain (Fig. 2) having two types of links with a distinguishable physical characteristic from each other. He discloses the links are painted with different colors (selecting colors are designers choice but it would be obvious to select colors distinctive to each other. One of ordinary skills in the art preferably selects a dark color such as black to minimize noise in detecting a reflected light.) and illuminated by a light. An optical detector detects the reflected light and examines for the appropriate color spectrum. Then the link type is verified (page 3-4, (6) of the description of the preferred embodiments).

However, Ledvina et al. does not disclose the detection is accomplished through reading a line image such as a barcode.

As discussed above in rejected claim 1 stated above, Saka et al. discloses a method of identifying a missing part in a workpiece by reading a machine readable code (barcode on a product or ID card attached on a pallet) and generating and transmitting a signal from the read data encoded in the code. Saka further discloses a step to compare the signal to a completed work (according to a work order sheet generated by the line host controller) and indicate if the processed signal is mismatched.

In view of Saka et al., it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to further incorporate a method of reading a bar-coded label to identify a missing part or an inappropriate part in addition to the assembly line of a power transmission chain production system of Ledvina et al. due to the fact that more data can be recorded on the medium (barcode or ID card) for the purposes of validating a right part in a

Art Unit: 2876

workpiece. The barcode contains more information than two links having two different colors painted on them. It provides information regarding a part such as code and control number, part numbers, manufacturing dates and so on. Accordingly, Saka's reference undoubtedly allows more data can be encoded regarding a part in a workpiece. Furthermore, such modification of employing a barcode reading/detecting system of Saka et al. to the teachings of Ledvina would have been an obvious matter of design variation, well within the ordinary skill in the art, and therefore an obvious expedient.

### ***Response to Arguments***

6. Applicant's arguments filed March 04, 003 have been fully considered but they are not persuasive.

### **Rejection under 35 U.S.C. § 102:**

The applicant argues that the parts (workpieces) are moving not a barcode on page 6, 2<sup>nd</sup> paragraph. The examiner respectfully disagrees. As the prior art of the record, Saka et al. (US 5,434,792) teaches in column 4, lines 18-22, the bar codes are attached to the parts and the parts are moving on the transporting means such as a conveyor. Therefore, one of the ordinary skill in the art would interpret that the both the workpiece and the barcode are moving relative to a barcode. Furthermore, the applicant states that no bar code is involved in Applicant's independent claims 1 or 19. While the statement may be true, the limitations in claims 1 or 19 undoubtedly can be broadly interpreted as a barcode. A barcode is well known in the art to comprise a bar (line) and a space (blank-no line). A barcode image is an image of a plurality of lines and spaces. Therefore, a barcode image inherently contains a line image as recited in the step b) of claims 1 and 19.

• Art Unit: 2876

The applicant argues in the 4th paragraph on page 4, applicant argues that Saka does not teach or suggest detecting a line image and producing a signal representative of the image. Saka et al. teach in col. 7 lines 11+ explains the comparing process to identify whether a product is missing a part or not. It is only logical to compare the status of assembly/product line with a complete product with no missing parts. A data with a complete product is a reference and the representation of the complete produce is a signal that would be compared with the status of the assembly/product line. It would not make sense to compare the status with a missing part. Therefore, the applicant's argument is not persuasive.

**Rejection under 35 U.S.C. § 103 (a):**

As discussed above in connection with rejection under 35 U.S.C. § 102(b), the 103(a) rejection is maintained. Furthermore, in response to the applicant's argument about the invention not using a bar code, it is respectfully suggested to particularly point out and distinctly claim the invention over the cited prior art.

For the reasons stated above, the rejections (102 b and 103 a) of claims 1-30 are maintained.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

Art Unit: 2876

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven S. Paik whose telephone number is 703-308-6190.

The examiner can normally be reached on Mon - Fri (7:00am-3:30pm).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 703-305-3503. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0530.

*Steven Paik*

Steven S. Paik  
Examiner  
Art Unit 2876

ssp  
May 6, 2003

  
MICHAEL G. LEE  
SUPERVISORY EXAMINER  
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